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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of the claims in the application:

Listing of Claims:

1. (Canceled)

2. (Canceled)

3. (Withdrawn) A method of curing coating on articles including the steps of:
   a) heating and analyzing a sample of the article;
   b) optimizing the heating time, temperature and energy for the best cure of the article; and
   c) submitting the article to the optimized parameters to cure the coating on the article.

4. (Withdrawn) A method of curing coating on articles including the steps of:
   a) heating the article with an infrared energy source; and
   b) curing the coating on the article using an ultraviolet energy source.

5. (Withdrawn) A method of curing coatings on articles using a high intensity short wavelength energy source including the steps of:
   a) pulsing the energy source to penetrate the coating and heat the substrate for the coating, in addition to heating the coating from one side, resulting in the substrate in turn heating the coating from the other side; and
   b) preventing the coating from heating the substrate by maintaining the substrate above the coating temperature whereby uniform heating and curing of the coating is accomplished.

6. (Canceled)

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7. (Canceled)

8. (Canceled)

9. (Canceled

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Canceled)

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21. (Canceled)

22. (Withdrawn) The method of claim 2, 3, or 4 including the step of:
a.) generating a substrate/coating interface temperature sufficient to result in a wetting action at the interface between the coating and the substrate to enhance adhesion of coating of substrate.

23. (Withdrawn) The method of claim 21, wherein the wetting action occurs before curing of the coating.

24. (Withdrawn) The method of claim 2, 3, or 4, including the step of providing hot air to the coating surface to simulate convection heating in maintaining the coating surface temperature.

25. (Withdrawn) The method of claim 2, 3, or 4, including the step of preheating a powder coat to gel temperature prior to exposure to curing energy

26. (Withdrawn) The method of claim 24 wherein the article is transferred in an in-line process.

27. (Withdrawn) The method of claim 25 wherein the energy source is short wavelength IR and programmed to line speed for energy level and time of process.

28. (Withdrawn) The method of claim 26 wherein the energy source is 100 watts/sq. in.

29. (Withdrawn) The method of claim 24 wherein the curing energy is an UV source.

30. (Withdrawn) The method of claim 2, 3 or 4 including the step of selecting coating surface temperature as an input command signal for closed loop temperature control.

31. (Withdrawn) The method of claim 28 wherein the energy source is 600 watts/sq. in.

32. (Withdrawn) The method of claim 2, 3 or 4 using short wavelength as the energy source to penetrate the coating surface.

33. (Withdrawn) The method of claim 31, including the step of penetrating to the coating substrate with the short wavelength energy sources.

34. (Withdrawn) A multipurpose high intensity energy source single zone curing stating having:

a) Short wavelength ability
b) Medium wavelength heating ability
c) Long wavelength heating ability.

35. (Canceled)

36. (Canceled)

37. (Canceled)

38. (Canceled)

39. (Canceled)

40. (Canceled)

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41. (New) A powder coating system, comprising:

a conveyor component adapted to support powder coated articles, and to move the articles;

at least one infrared radiation source adapted to emit short, medium, or long wavelength infrared radiation or any combination thereof, the at least one infrared radiation source defining at least one thermal heating zone where the at least one infrared source is in radiant thermal communication with the conveyor component;

a programmable infrared controller circuit in electronic controlling communication with the at least one infrared radiation source, the infrared controller being adapted to tune the infrared source to a selected peak infrared wavelength; and

a programmable conveyor controller circuit in electronic controlling communication with the conveyor component, the conveyor controlling circuit being adapted to control the speed and direction of the conveyor component.

42. (New) The system of claim 41, further comprising at least one UV radiation source defining at least one ultraviolet zone where the at least one UV source is in radiant communication with the conveyor component, and wherein the at least one ultraviolet zone is spatially separated from the at least one thermal heating zone, and further comprising a programmable UV controller circuit in electronic controlling communication with the at least one UV radiation source.

43. (New) The system of claim 41, further comprising a temperature detector for measuring the temperature of a coated article, the temperature detector being adapted to sense the temperature of a work piece, and feed the temperature data back to at least one controller circuit.

44. (New) The system of claim 43, wherein the at least one controller circuit includes the programmable infrared controller circuit, and wherein the infrared controller circuit is adapted to adjust the infrared output of the at least one infrared source in response to temperature data received from the temperature detector.

45. (New) The system of claim 43, wherein the at least one controller circuit includes the programmable UV controller circuit, and wherein the UV controller circuit is adapted to adjust the UV output of the at least one UV source in response to temperature data received from the temperature detector.

46. (New) The system of claim 41, wherein the at least one infrared radiation source is adapted to adjust its radiant output according to control commands received from the programmable infrared controller circuit.

47. (New) The system of claim 46, wherein the programmable infrared controller circuit is adapted to tune the peak wavelength of the infrared output.

48. (New) The system of claim 46, wherein the programmable infrared controller circuit is adapted to pulse the infrared output according to a predetermined pattern.

49. (New) The system of claim 46, wherein the programmable infrared controller circuit is adapted to raise the temperature of a an interface of a coating and a substrate, wherein the interface temperature is raised at a rate exceeding the rate at which the substrate temperature raises, and wherein the substrate temperature is taken to be the temperature averaged over the entire substrate.

50. (New) The system of claim 49, wherein the programmable infrared controller circuit pulses the infrared radiation output so that the infrared radiation output rapidly heats the coating on the substrate without damaging the coating.

51. (New) The system of claim 49, wherein the programmable infrared controller circuit tunes the infrared radiation output so that the infrared radiation penetrates to a predetermined depth into a coated substrate.

52. (New) The system of claim 41 comprising at least two infrared radiation sources each defining a separate thermal heating zone.

53. (New) The system of claim 41, wherein the at least one infrared radiation source is adapted to produce radiation at about 100 watts/in^2.

54. (New) The system of claim 41, wherein the at least one infrared radiation source and the at least one UV radiation source are arranged in an in-line relation to each other.

55. (New) The system of claim 41, wherein the at least one UV radiation source is adapted to adjust its radiant output according to control commands received from the programmable UV controller circuit.

56. (New) The system of claim 41, wherein the at least one UV radiation source is adapted to produce radiation at about 600 watt/in^2.

57. (New) The system of claim 41, wherein one or more of the radiation sources are adapted to emit an amount of radiation sufficient to cause a powder coating to gel and wet onto a substrate surface, wherein the coated substrate is disposed on the conveyor component.

58. (New) The system of claim 42, wherein one or more of the radiation sources are adapted to emit an amount of radiation sufficient to cure a coating on a coated article carried by the conveyor component.

59. (New) The system of claim 42, wherein one or more of the programmable infrared controller circuit, or the programmable UV controller circuit are adapted to record one or more of coating temperature, substrate temperature, infrared source voltage, UV source voltage, UV source temperature, or infrared source temperature.

60. (New) The system of claim 41, wherein the conveyor controller circuit is adapted to position work pieces disposed on the conveyor in thermal and/or radiant zones for programmed amounts of time, and wherein the conveyor controller circuit is adapted to reverse the direction of the conveyor component.

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